

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Manufacturing plastic articles via industrial processing methods, including compounding and conversion.
For professional users only.

1.3. Details of the supplier of the safety data sheet

Company name:	KRAIBURG TPE GmbH & Co. KG
Street:	Friedrich-Schmidt-Str. 2
Place:	D-84478 Waldkraiburg
Telephone:	+49 (8638) 9810 0
E-Mail:	regulatory@kraiburg-tpe.com

1.4. Emergency telephone number

Telephone: +49 (8638) 9810 0 (only available at office times)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008 [CLP]

Classification: not classified

Hazard statements: none

Additional remarks:

The preparation is not classified as dangerous to environment or health as the blowing agent is encapsulated in the product.

2.2. Label elements

Regulation (EC) No 1272/2008 [CLP]

Additional advice on labelling

According to EC directives or the corresponding national regulations, there is no labelling obligation for this product.

Additional labelling

EUH 018 In use may form flammable/explosive vapour-air mixture.

2.3. Other hazards

Dust may form explosive mixture in air.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Expandable microspheres-preparation (acrylic copolymer encapsulating a blowing agent), polymer bond.

Hazardous components

EG No	Chemical name	Quantity
CAS No		
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
201-142-8	Isopentane	≤ 13 %
78-78-4		

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601-006-00-1	Flam. Liq. 1, H224; Asp. Tox. 1, H304; STOT SE 3, H336; Aquatic Chronic 2, H411; H224 H304 H336 H411
601-085-00-2	
01-2119475602-38	

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Move victim out of danger zone.

After inhalation

Provide fresh air. In case of irritation of the respiratory tract, seek medical advice.

After contact with skin

Wash with generous amount of water. Change contaminated clothing.

Following contact with the melted product, quickly cool affected skin area with plenty of cold water.

After contact with eyes

Rinse eyes immediately with water or in the eye-bath carefully and thoroughly. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water, seek medical advice when symptoms appear.

4.2. Most important symptoms and effects, both acute and delayed

In case of skin irritation, seek medical treatment.

4.3. Indication of any immediate medical attention and special treatment needed

No special measures are necessary.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Extinguishing materials should be selected according to the surrounding area; alcohol resistant foam, dry extinguishing powder, carbon dioxide (CO₂) or water spray.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Exposure of toxic gases in case of fire possible; containers close to fire should be transferred to a safe place, they should be sprayed with water to keep them cool, pressure build-up takes place under the influence of heat. Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

Pyrolysis products, toxic.

5.3. Advice for firefighters

In case of fire: gloves and overalls; wear self-contained breathing apparatus.

Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Common precautions, danger of slipping, avoid generation of dust, eliminate all sources of ignition and prevent spark formation as a result of static electricity.

6.2. Environmental precautions

Spillages should be removed mechanically.

6.3. Methods and material for containment and cleaning up

Collect mechanically. Treat the assimilated material according to the section on waste disposal.

Do not allow to enter drains/surface water/ground-water.

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6.4. Reference to other sections

See protective measures under point 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

keep dry and cool not exceeding 40 °C, avoid dust formation, provide adequate ventilation, prevent small spills and leakage to avoid slip hazard,
open container in a well ventilated area, allow enough time to permit escape of harmful and flammable vapours before emptying,
maintain adequate ventilation when preparing mixtures and during the expansion process, the release of blowing agent is increased during expansion, use grounded electrical equipment, keep away from heat, hot surfaces, sparks, open flames and other ignition sources, no smoking.
Dust may form explosive mixture in air.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage dry and not exceeding 40 °C in original packaging.

Advice on storage compatibility

Keep away from food, drink and animal feedingstuffs.

German storage class: Combustible Solids

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Substance	CAS No	Long Term (LTEL)	Short Term (STEL)	Exposure limits (TRGS 900)
Isopentan	78-78-4			1000 ml/m ³ , 3000 mg/m ³
Total dust				1,25mg/m ³ alveolar dust fraction 10 mg/m ³ , inhalable fraction

8.2. Exposure controls

Protective and hygiene measures

Protective clothing. Take off contaminated clothing and wash before reuse.

Usual measures of plastic processing ensure good personal hygiene. Wash hands before breaks and at the end of work. When using do not eat or drink.

Eye/face protection

Wear eye/face protection.

Suitable eye protection: Framed glasses.

Hand protection

Avoid skin contact with molten material.

Wear suitable gloves.

Required properties: heat-resistant.

Respiratory protection

Avoid dust formation, provide appropriate exhaust ventilation, dust mask, when dusting cannot be avoided, half mask with a particle filter P2 (EN 143).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid
Colour:	pale yellow

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Odour:	neutral	
pH-Value:		not applicable
Changes in the physical state		
Melting temperature of polymer carrier:		ca. 80 °C
Initial boiling point and boiling range:		not applicable
Start temperature of microspheres expansion		> 110 °C
Flash point:		not applicable
Flammability		
Solid:	in use may form flammable/explosive vapour-air mixture, dust may form explosive mixture in air	
Gas:		not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Ignition temperature:		not determined
Auto-ignition temperature		
Solid:		not determined
Gas:		not applicable
Decomposition temperature:		not determined
Vapour pressure:		not applicable
Density (at 20 °C):		1,04 g/cm ³ calculated
Water solubility:		not soluble
Solubility in other solvents		
Partition coefficient:		not determined
Vapour density:		not determined
Evaporation rate:		not determined
<u>9.2. Other information</u>		
Solid content:		not determined
Bulk density:		ca. 0,5 kg/dm ³

SECTION 10: Stability and reactivity

10.1. Reactivity

There are no data available on the preparation/mixture itself.

10.2. Chemical stability

There are no data available on the preparation/mixture itself.

10.3. Possibility of hazardous reactions

Risk of explosive air-mixtures; release of blowing agent during expansion, use grounded electrical equipment, eliminate all sources of ignition and prevent spark formation as a result of static electricity, dust explosion hazard.

10.4. Conditions to avoid

Temperatures exceeding 40 °C, heat, flames and sparks, dust formation, if the product is stored at temperatures above 60 °C, the release of blowing agent increases with a risk of explosive air-mixtures.

10.5. Incompatible materials

There are no data available on the preparation/mixture itself.

10.6. Hazardous decomposition products

In case of fire: carbon oxides (CO_x), nitrogen oxides (NO_x).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

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Acute toxicity

CAS No	Chemical name	Method	Dose	Species	Source
	Exposure routes				
	Preparation/Mixture		> 5000 mg/kg		Professional judgement / supplier (estimation)

Further information:

The product is not classified as dangerous to health, as the blowing agent is encapsulated in the product, a person handling the product will not come in contact with the substance, gas formed at elevated temperature can cause irritation of the respiratory system, eyes and skin.

Practical experience

Dust may cause transient irritation in the respiratory organ.
Contact with dust may cause eye irritation.
Contact with dust may cause skin dryness.

Other observations

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name	Method	Dose	[h] [d]	Species	Source
	Aquatic toxicity					
	microspheres					
	Acute toxicity to fish	LC ₅₀	> 5000 mg/l	96 h		Supplier

German water hazard classification: 1 (slight danger to water) according to VwVwS (17.05.1999) No. 766
(Plastics)

12.2. Persistence and degradability

Not readily biodegradable.

12.3. Bioaccumulative potential

Potential to bioaccumulate is low.

12.4. Mobility in soil

Immobile.

12.5. Results of PBT and vPvB assessment

This mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Remarks: The product is not classified as dangerous to environment, as the blowing agent is encapsulated in the product, if spilled it will not escape into the environment.

12.6. Other adverse effects

No symptoms known up to now.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Waste disposal according to official state regulations.

Waste disposal number of waste from residues/unused products

070299 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; wastes not otherwise specified

Waste disposal number of used product

070299 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; wastes not otherwise specified

Waste disposal number of contaminated packaging

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150106 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); mixed packaging

Contaminated packaging

Completely emptied packings can be re-cycled.

SECTION 14: Transport information

Land transport (ADR/RID)

Other applicable information (land transport)

No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

Other applicable information (marine transport)

No dangerous good in sense of this transport regulation.

Air transport (ICAO)

Other applicable information (air transport)

No dangerous good in sense of this transport regulation.

Further Remarks:

We recommend to transport at temperatures not exceeding 40 °C; keep dry.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No special measures are necessary.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not a hazardous material with respect to these transportation regulations.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

The preparation is not classified as dangerous according to Regulation (EC) No 1272/2008 [CLP]. The product is not classified as dangerous to environment or health, as the blowing agent is encapsulated in the product. Therefore a person handling the product will not come in contact with the substance and if spilled it will not escape into the environment.

Additional information

There is no requirement for the product to be specially labelled according to EC directives or the corresponding national laws.

National regulatory information

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H- and EUH-phrases (Number and full text)

H224 Extremely flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects. May cause drowsiness or dizziness.

| Data compared to the previous version altered.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)